

7. SUBJECT DETAILS

7.1 MANAGEMENT SCIENCE

7.1.1 Objective and Relevance

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i. JNTU

ii. GATE

iii. IES

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i. JNTU

ii. GATE

iii. IES

7.1.1 OBJECTIVE AND RELEVANCE

This subject effectively helps any engineer to know the concepts of management and the techniques, which need to be adopted for the successful utilization of the resources. In modern business environment, the functions of the manager are more or less the same irrespective of the nature and size of the organization. Hence this will help him to successfully carry out his endeavour in any area wherever he is placed and also to manage an organization if he intends to start a business of his own.

The subject introduces the student to the various theories of management, levels and its functions, which ought to be carried out at each level for the success of the organization. The three levels discussed are high level or strategic management, middle level or tactical management and low level or operational management.

The top level management constituted of owners, directors, CEO's do the planning for the organization regarding targets which need to be achieved in the future and in the immediate future taking into consideration of the opportunities available to them and the threats they may face from the competitors.

The middle level management constituted of executives of various departments stand as a bridge in between high level and low level managements for the execution of the plans as set by the top level management. The low level management executes production of the product using the resources available.

7.1.2 SCOPE

This subject covers the areas of production management, operations management, highlighting the significance of management in the organisations. It also emphasizes on human resource management which is considered as human capital and the most important factor of production for the success of the organisation. Strategic management highlights on core competencies of the firm through SWOT analysis. It also gives the significance of project management which shows efficiency of the organisation. It introduces students to the concept of contemporary management practices giving basics of MIS, material requirement planning, ERP, BPO, Six sigma the like. All the areas give a scope to understand the importance of different branches of management and their practical application in this competitive business environment.

7.1.3 PREREQUISITES

Basic knowledge about the organisational hierarchy, the frame work with in which it functions, policies and programmes adopted, the HR practices and modern business environment and contemporary management.

7.1.3.1 FACULTY

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7.1.4.1 JNTU SYLLABUS

UNIT I
OBJECTIVE

This unit introduces the students to different theories proposed by various management pioneers like Taylor, Fayol, Maslow. It explains different concepts of management, its nature and features. The importance of management in the modern business scenario, the development of management thought. It also introduces the students to the structure of the organisation, which provides the platform for managerial functions to be performed

SYLLABUS

Introduction, concept of management and organization, nature, importance and functions of management, Taylor's Scientific management theory, Fayol's principles of management, Mayo's Hawthorne experiments, Maslow's theory of human needs, Douglas McGregor's theory X and theory Y, Herzberg's two factor theory of motivation, systems approach to management, leadership styles, social responsibilities of management.

UNIT-II

OBJECTIVE

This unit deals with organisational design and different concepts related to organisational structure. The significance of structures, line and staff and other structure like functional organisation, matrix organisation, virtual organisation, cellular organisation, team structure and lean and flat organisation structure are explained along with merits and demerits and their suitability

SYLLABUS

Designing organisational structures, basic concepts related to organisation, departmentation and decentralisation, types of mechanistic and organic structures of organisation (Line organization, line and staff organization, functional organization, committee organization, matrix organization, virtual organisation, cellular organisation, team structure, boundaryless organization, inverted pyramid structure, lean and flat organization structure) and their merits, demerits and suitability.

UNIT-III

OBJECTIVE

This unit focuses on operational level, production and productivity, types of production for different types of products, and various techniques to increase productivity. Work study, method study explain how unnecessary movements of worker can be reduced there by reducing the wastage and to increase the productivity.

Statistical quality control method explains how to maintain quality of the products being manufactured through techniques like acceptance sampling.

SYLLABUS

Operational management, principles and types of plant layout methods of production (Job, batch and mass production), work study, basic procedure involved in method study and work measurement, statistical quality control, X chart, R chart, p chart, (simple problems), acceptance sampling, Deming's contribution to quality.

UNIT-IV

OBJECTIVE

This unit deals with material management. The purpose of the inventory control, the ways in which economic quantities can be procured is explained. The students get to understand methods of classification, codification of materials, stores management, purchasing procedure. The post production aspect which is marketing, explain the various marketing strategies, product life cycle and channels of distribution.

SYLLABUS

Material management: objectives, need for inventory control, EOQ, ABC analysis, purchase procedure, stores management and stores records.

Marketing: functions of marketing, marketing mix, marketing strategies based on product life cycle, channels of distribution.

UNIT-V

OBJECTIVE

This unit focuses on how to effectively manage the key resource of the organization, namely the human resource. Many organizations have begun to realize that the success of the organization depends upon the quality and quantity of manpower. Hence this unit discusses about the functions of HR-manager on how he needs to effectively recruit manpower, how to train them to make them fit for doing the job, how to fix the compensation package for the service rendered and how to settle the grievances which may arise among the workers etc.,

SYLLABUS

Human resources management (HRM), concepts of HRM, HRD and personnel management and industrial relations (PMIR), HRM V/s PMIR, basic functions of HR manage, manpower planning, recruitment, selection , training and development, placement, wage and salary administration, promotion, transfer and separation, performance appraisal, grievance handling and welfare administration, job evaluation and merit reading

UNIT-VI

OBJECTIVE

This unit focuses on project management i.e., execution of the project within the limitations of time and resources available. The two techniques discussed are PERT and CPM. The former is a probabilistic method, which determines the time duration for each activity in the project and the overall probability of completing the project in a given period of time. The latter is a deterministic method, used whenever project needs to be crashed in the time of urgencies. It is used to find the optimum time and cost involved in the execution of the project, during crashing.

SYLLABUS

Project management (Pert/CPM), Network analysis, programme evaluation and review technique (PERT), critical path method (CPM), identifying critical path, probability of completing the project within given time, project cost analysis, project crashing (simple problems)

UNIT-VII

OBJECTIVE

This unit focuses on how managers lead the organisation strategically withstanding the competition and derive competitive advantage. It discusses about the vision, mission, goals and objectives which lead to attainment of overall objectives of the organisation. And also deals about the SWOT analysis which enables organisation to understand their strengths, weakness, opportunities and threats.

SYLLABUS

Strategic management, mission, goals, objectives, policy, strategy, programmes, elements, of corporate planning process, environmental scanning, value chain analysis, SWOT analysis steps in strategy formulation and implementation, generic strategy alternatives.

UNIT-VIII

OBJECTIVE

Contemporary management practices deals with the basic concept of management information system, concepts of total quality management , supply chain management, ERP and BPOs.

SYLLABUS

Contemporary management practices, basic concepts of MIS, end user computing, materials requirement planning (MRP), Just -in-time(JIT) system, total quality management (TQM) Six sigma and capability maturity model (CMM) levels, supply chain management, enterprise resource planning (ERP), performance management, business process outsourcing (BPO) business process Re-engineering and bench marking, balanced score card.

7.1.4.2 GATE SYLLABUS

Not applicable

7.1.4.3 IES SYLLABUS

Not applicable

7.1.5 SUGGESTED BOOKS

TEXT BOOKS

- T1 Management Science, Aryasri, TMH, 2004
- T2 Management, Stoner, Freeman, Gilbert, Pearson Education, New Delhi, 6th Ed. 2004.

REFERENCE BOOKS

- R1 Kotler Philip & Keller Kevin Lane: Marketing Management 12/e, PHI, 2005
- R2 Koontz & Weihrich: Essentials of Management, 6/e, TMH, 2005
- R3 Thomas N. Duening & John M. Ivancevich Management, Principles and Guidelines, Biztantra, 2003.
- R4 Kanishka Bedi, Production and Operations Management, Oxford University Press, 2004.
- R5 Memoria & S.V. Gauker, Personnel Management, Himalaya, 25/e, 2005
- R6 Samuel C. Certo: Modern Management, 9/e, PHI, 2005
- R7 Schermerhorn, Capling, Poole & Wiesner: Management, Wiley, 2002.
- R8 Parnell: Strategic Management, Biztantra, 2003.
- R9 Lawrence R. Jauch, R. Gupta & William F. Glueck: Business Policy and Strategic Management, Frank Bros. 2005.
- R10 L.S. Srinath: PERT/CPM, Affiliated East-West Press, 2005.
- R11 Principles and Practice of Management, LM Prasad, S. Chand and sons
- R12 Industrial Engineering Management, OP Khanna, Dhanpat Rai, 1999
- R13 Personnel Management, Memoria and S.V. Gauker, Himalaya, 25/e, 2005
- R14 Production and Operation management, K. Aswathappa, K Sridhar Bhatt,
- R15 Marketing Management, Kotler Philip, PHI, 2002
- R16 Essential Management, Koontz and Weihrich, TMH, 6/e, 2005
- R17 PERT/CPR, L.S. Srinath, Affiliated East-West Press, 2005,
- R18 Business Policy and Strategic Management, Lawrence R. Jauch, R. Gupta and Williams, F. Glueck, Frank Bros., 2005.

7.1.6 WEBSITES

- 1. www.strat.com
- 2. www.vu.edu.au
- 3. www.iif.edu/academifraternity/faculty.htm
- 4. www.management.bu.edu
- 5. www.aprat.com
- 6. www.finmin.nic.in

7.1.7 EXPERTS' DETAILS

INTERNATIONAL

- 1. Mr. Francis J. Flynn
Associate Prof. of Organisational Behaviour
Stanford University
Graduate School of Business
Email: flynn_francis@gsb.stanford.edu
- 2. Mr. William P. Barnett
Prof. Business Leadership, Strategy

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3. Peter F. Drucker,
Clarke Professor of Social Science and Management
Claremont Graduate School,
California

NATIONAL

1. Mr. P. L. Tandon,
Professional Management in India,
Department of Business Management, Ludiana,
Punjab, Agri University – 1974.
2. Mr. C.K. Prahalad,
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3. Mr. Arindam Chaudhuri,
Professor in Economics,
IIPM, New Delhi
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4. Mr. Jerome Joseph
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REGIONAL

1. Mr. B. Krishna Reddy
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Email: suravindac@yahoo.com
4. Prof. G. Prasad, M.Com, B. L., Ph.D.
Chairman, Board of Studies (PG)
Nagarjuna University
Email: profprasadnu@yahoo.com

7.1.8 JOURNALS

INTERNATIONAL

1. Econometrica (NA)
2. Sloan Management Journal (NA)
3. Harvard Business Review I.
4. International Business Review (NA)
5. Journal of International Business Studies (NA)

6. Strategic Management Journal (NA)

NATIONAL

1. Management Insight (NA)
2. Business Vision I.
3. ICFAI Journal of Organisational Behaviour I.
4. Indian Today I.
5. Journal of Management Studies I.
6. ICFAI Journal of Marketing Management I.

* NA - Not available
A- Available

7.1.9 FINDINGS AND DEVELOPMENTS

1. Strategic Management, The Strategy field from the Perspective of Management Science, Divergent Stands and Possible Integration, Giovanni Gavetti, Harvard Business School, Volume No. 50, No. 12, Supplement, December 2004, PP : 1763.
2. Operations and Supply Chain Management, Five decades of operations management and prospects ahead, Sunil Chopra and William Love Joy, Kellogg School of Management, Illinois, Volume No. 50, No. 12, Supplement, December 2004, PP : 0025.

7.1.10 SESSION PLAN

Sl. No	Topics in JNTU Syllabus	Modules and Sub modules	Lecture No.	Suggested Books	Remarks
UNIT-I (Management, skills Overview)					
1	Introduction to management	Introduction	L1	T1-Ch1, R1-Ch23	
2	Concept of management and organization Nature, importance and function of management	Concepts challenges to management		T1-Ch1, R1-Ch23	
3	Taylor's scientific management	Scientific management period	L2	T1-Ch3, R1-Ch23	
4	Faylor's principles of management	Natureand features	L3	T1-Ch3, R1-Ch23	
5	Hawthorne experiments	Hawthorne experiments	L4	T1-Ch3, R1-Ch23	
6	Maslows theory of human needs	Motivational factors	L5	T1-Ch3, R1-Ch23	
7	Dugla'sMcgreor's theory X and theory Y	Theory X and Theory Y	L6	T1-Ch3, R1-Ch23	
8	Herberg's Two factor of motivation	Hygiene factors	L7	T1-Ch3, R1-Ch23	
9	Systems approach to management	Systems approach to management	L8	T1-Ch3, R1-Ch23	
10	Leadership styles	Leadership theories	L9	T1-Ch3, R1-Ch25	
11	Social responsibilities of management	Social responsibilities of business	L10	T1-Ch3, R1-Ch25	
UNIT-II (View on organizations, structures)					
12	Designing organizational structures Basic concepts Departmentation Features	Basic concepts related to organisation	L11	T1-Ch4, R1-Ch12	
13	Departmentation and decetralisation	Departmentation and decetralisation	L12	T1-Ch4, R1-Ch12	
14	Types of mechanistic and organic structures for organisation	Mechanistic systems	L13	T1-Ch4, R1-Ch13	
15	Line organisation Staff organisation	Department line Merits Staff features	L14	T1-Ch4, R3-Ch6	
16	Functional organisation	Suitability of firm	L15	T1-Ch5, R3-Ch6	
17	Committee organisation Matrix organisation Virtual organisation	Design of matrix structure Reasons for virtual organization Virtual office	L16	T1-Ch5, R3-Ch6	
18	Cellular organisation Team organisation	Organization structures	L17	T1-Ch5, R3-Ch6	
19	Boundary less organisation	Organization forms	L18	T1-Ch5, R3-Ch6	
20	Merits Demerits and suitability	Merits, demerits and suitability of various organizational forms	L19	T1-Ch5, R3-Ch6	

Sl. No	Topics in JNTU Syllabus	Modules and Sub modules	Lecture No.	Suggested Books	Remarks
UNIT-III (Focus on materials, operations management)					
21	Operations management principles	Principles and types of plant layout	L20	T1-Ch6, R2-Ch4 R4-Ch20	
22	Methods of production (job batch and mass production)	Objectives of good plant layout Process layout Product layout	L21	T1-Ch6, R2-Ch4 R4-Ch20	
23	Work study Basic procedure involved method study and work measurement	Need for workstudy Objectives of work measurement	L22	T1-Ch8, R2-Ch4 R4-Ch20	
24	Statistical quality control	Definition and concepts	L23	T1-Ch9, R2-Ch4 R4-Ch20	
25	Chart , R chart C chart and P Chart Simple problems	Control charts Purpose and advantages	L24	T1-Ch7, R2-Ch4 R4-Ch20	
26	Acceptance sampling Demings contribution to quality	Sampling	L25	T1-Ch7, R2-Ch4 R4-Ch20	
UNIT-IV (Marketing , EOQ overview)					
27	Material management Objectives Need for inventories control EOQ	Functions of material management Objectives Economic order quantity	L26	T1-Ch10, R2-Ch23 R4-Ch22	
28	ABC analysis Stores management and store records Purchase procedure	Necessity, steps Stores and material control Purchase or procurement	L27	T1-Ch10, R2-Ch23 R4-Ch22	
29	Marketing Functions of marketing Marketing mix	Introduction and definition Production, price, promotion and distribution	L28	R5-Ch10, R2-Ch31 R6-Ch5	
30	Marketing strategies Based on product life cycle	Sales promotion Product mix stages	L29	R5-Ch11, R2-Ch31 R6-Ch5	
31	Channels of distribution	Marketing channels	L30	R5-Ch11, R2-Ch31 R6-Ch5	
32	Revision of Unit 1 and 2	Revision of Unit 1 and 2	L30	T1-CH1, CH2 & CH3	
33	Revision of Unit 3 and 4	Revision of Unit 3 and 4	L31	T1-CH4, CH5, CH6 & CH7	
UNIT-V (Manpower, HR manager duties etc.)					
32	Human resource management (HRM) Concept of HRM HRD, Personnel management and PMIR HRM Vs PMIR	Introduction to HRM Benefits of HRM Objectives	L31	T1-Ch12, R3-Ch31 R6-Ch11	
33	Basic functions of HR manager	The general and specific functions	L32	T1-Ch12, R3-Ch9 R6-Ch11	
34	Manpower planning Recruitment Selection Training and development	Manpower planning definition process	L33	T1-Ch12, R3-Ch8 R6-Ch11	

SI. No	Topics in JNTU Syllabus	Modules and Sub modules	Lecture No.	Suggested Books	Remarks
35	Placement Wage and salary Administration Promotion	Nature and purpose Compensation reward	L34	T1-Ch13, R3-Ch8 R6-Ch11	
36	Transfer separation Performance Handling and welfare administrations	Purpose of transfer Separation Welfare administration	L35	T1-Ch13, R3-Ch11	
37	Job evaluation and merit rating	Objectives principles of Job valuation and merit rating	L36	T1-Ch14, R3-Ch15	
UNIT-VI (overview on PERT,CPU)					
38	Project management (PERT/CPM) Network analysis	Introduction to network analysis Ganttbar charts milestones charts	L37	T1-Ch18, R2-Ch10 R7-Ch2	
39	PERT CPM, identifying critical path	PERT steps Critical path method	L38	T1-Ch18, R2-Ch10 R7-Ch2	
40	Probability of completing the project within given time	Time estimates	L39	T1-Ch18, R2-Ch10 R7-Ch2	
41	Project cost analysis	Significance of cost analysis	L40	T1-Ch19, R2-Ch10 R7-Ch2	
42	Project crashing Simple problem	Simple problems	L41	T1-Ch19, R2-Ch10 R7-Ch2	
UNIT-VII (Strategic, SWOT Analysis overview)					
43	Strategic management	Introduction to Strategic management	L42	T1-Ch17, R3-Ch3 R8-Ch7,8	
44	Mission Goals and objectives	The nature of objectives	L43	T1-Ch17, R3-Ch3 R8-Ch7,8	
45	Policy, strategy and programmes	Policies Procedures	L44	T1-Ch17, R3-Ch3 R8-Ch7,8	
46	Elements of corporate planning Process Environmental scanning	Situational analysis	L45	T1-Ch17, R3-Ch3 R8-Ch7,8	
47	Value chain analysis SWOT analysis	Strengths weaknesses Opportunities threats	L46	T1-Ch16, R3-Ch3 R8-Ch7,8	
48	Steps in strategy formulation and implementation	The Strategic planning process	L47	T1-Ch16, R3-Ch3 R8-Ch7,8	
49	Generic strategy alternatives	The Strategic planning process	L48	T1-Ch15, R3-Ch3 R8-Ch7,8	
UNIT-VIII (focus on MIS,JIT,PPU,PPR etc.)					
50	Contemporary management practices	Basic concepts Practices	L49	R2-Ch39 R4-Ch17,R4-Ch20	
51	Basic concepts of MIS End user computing	Applications of MIS Features of MIS	L50	R2-Ch39 R4-Ch17,R4-Ch20	

Sl. No	Topics in JNTU Syllabus	Modules and Sub modules	Lecture No.	Suggested Books	Remarks
52	Materials requirement planning Just-in-Time (JIT) system	MRP inputs General overall view of MRP	L51	R2-Ch39 R4-Ch17,R4-Ch20	
53	Total quality management (TQM)	Quality control technique	L52	R2-Ch39 R4-Ch17,R4-Ch20	
54	Six sigma and capability maturity model (CMM) levels Supply chain management	Organization for quality control	L53	R2-Ch39 R4-Ch17,R4-Ch20	
55	Enterprise resource planning Performance management	Functions of ERP Features	L54	R2-Ch39 R4-Ch17,R4-Ch20	
56	Business process outsourcing Business process reengineering and benchmarking Balance score card	Applications Aspects of score card	L55	R2-Ch39 R4-Ch17,R4-Ch20	
57	Revision of Unit 5 & 6	Revision of Unit 5 & 6	L65	R1-CH8,CH9 & CH10	
58	Revision of Unit 7 & 8	Revision of Unit 7 & 8	L66	R1-CH11 & CH13	

7.1.11 STUDENT SEMINAR TOPICS

1. Supply chain management, The management accountant, The institute of cost and works accountant of India, Vol.39, no. 9, Sep 2004.
2. The Marketing Department in Management Science, Its History, Contributions, and the Future, Donald G. Morrison, Jagmohan S. Raju, Vol. 50, No. 4, April 2004, pp. 425–428,
3. A Perspective on Asymmetric Information, Incentives and Intra-firm Resource Allocation, Madhav V. Rajan, Stefan Reichelstein, Vol. 50, No. 12, December 2004, pp. 1–9
4. Five Decades of Operations Management and the Prospects Ahead, Sunil Chopra, William Lovejoy, Candace Yano, Vol. 50, No. 1, January 2004, pp. 8–14

UNIT-I

1. Describe the nature and importance of management in modern business context. (May 09, Sep 12, Apr 13)
2. Name and describe the various levels of management with their functions. (May 09)
3. What are the basic leadership styles and their corresponding effective and ineffective styles? (May 09)
4. What are the Mayo's Hawthorne experiments? Why are they significant even today? (May 09)
5. Explain the concepts of management and organisation and analyse their relationship. (Sep 08)

6. Define management. State the important characteristics of management. **(Sep 08)**
7. What do you mean by social responsibility of managers? How can social responsibility be made operational in an organisation? **(Sep 08)**
8. State and explain the Taylor's scientific management. **(Sep 08)**
9. What are the managerial functions in a service providing organization such as Bharat Sanchar Nigam Limited (BSNL), Life insurance Corporation of India, etc. Explain. **(May 08, 07, Nov 04)**
10. i. Bring out the contrast between Theory X and Theory Y.
ii. Do you find people of these traits around you? Illustrate. **(May 08, 06, Sep 07)**
11. What is Maslow's hierarchy of human needs? Explain. **(May 08, 10, apr13)**
12. i. What are the three levels of management?
ii. What functions do you find at each of these levels? Explain. **(May 08, 06, Nov 04, 03)**
13. i. Why is management considered as a profession and what factors make it a profession?
ii. If you are appointed as a manager in a medium sized manufacturing company, what activities do you have to perform? Explain. **(May 08)**
14. i. What are the principles of management as outlined by Fayol?
ii. Explain whether they hold good in today's context. **(May 08)**
15. Name and describe the various levels of management with their functions. **(May 08)**
16. Explain theory X and theory Y as theories of motivation. **(May 08)**
17. Discuss the leadership styles with examples which Indian managers follow. Can you suggest a best style for them? How? **(May 08)**
18. What are the basic leadership styles and their corresponding effective and ineffective styles? **(May 08)**
19. Explain the nature and features of management? **(Sep 07, Nov 05)**
20. i. Can you Consider management either as an art or science? Justify your answer. **(Sep 07, Mar 06)**
ii. What are the features of Management? Explain.
21. i. What is the significance of Hawthorne experiments for management?
ii. Explain the Maslow's Theory of Hierarchy of Human Needs. **(May 07, 06)**
22. i. Discuss the main components of Theory of Scientific Management. **(May 07, Mar 06)**
ii. How has it influenced the thinking of managers? Explain.
23. i. Explain operative functions of management. **(May 07, 06)**
ii. What is matrix organization and what is uniqueness?
24. i. What are the managerial functions?
ii. How are they integrated? **(May 06)**
25. Trace the history of evolution of management thought with emphasis on modern management techniques. **(Mar 06)**
26. Explain the contributions of Frederick W. Taylor in the area of Scientific management and its utility t

27. Trace the history of evolution of management thought in brief. **(Dec 02, Nov 04)**
28. Explain the hierarchy of management object and briefly discuss the top down and bottom up approach.
29. "Management is regarded as an art by some, science by others" In the light of this statement. **(Apr 03)**
30. "The objective of business is to make profits. It has nothing to do with social responsibilities". Discuss this statement elaborately **(May 03)**
31. What are the objectives of Management? Explain functions of various management level. **(Jan 03, Apr 02)**

UNIT-II

1. a) Explain the line and staff organization and discuss its suitability
 b) explain the various types of committees. **(Jun 2013)**
- 2.a) What is boundaryless organization? Give its chart, advantages and disadvantages.
 b) Explain salient features of inverted pyramid structure. **(Dec 12)**
3. What are the various types of organisation structures? Explain them with their merits and demerits. **(May 10)**
4. Critically examine Herzberg's two-factor theory. Make a comparison between theories of Herzberg and Maslow. Which of these theories do you prefer in Indian context? Give reasons. **(May 10)**
5. Differentiate between cellular organisation and boundary-less organisation. Explain their merits and demerits. **(May 10)**
6. State the essential elements of good organisation. **(May 10)**
7. Define 'Departmentation' Explain its need in industries. **(May 10)**
8. What is types of committee organisation? Explain the basic principles of committee organisation **(Sep 08)**
9. Explain the following:
 i. Principle of Authority and Responsibility
 ii. Principle of Unity of Command
 iii. Principle of Span of Control
 iv. Principle of Exception. **(Sep 08)**
10. State the essential elements of good organisation. **(Sep 08,13)**

11. "Organisation structure refers to the differentiation and integration of activities, authority, roles and relationships". Explain. **(Sep 08)**
12. What is departmentation? How is it essential for the management of a business enterprise? **(May 08)**
13. Name and describe the principles of organisation. **(May 08)**
14. Describe briefly the various steps involved in organising procedure. **(May 08)**
15. What are the various types of organisation structures? Explain them with their merits and demerits. **(May 08)**
16. i. Explain and evaluate line and staff organization. **(May 08)**
ii. Where do you find it useful? **(May 08)**
17. Explain the concepts of line, line & staff and functional organizations. Also illustrate. **(May 08)**
18. Compare and contrast formal and informal organization. Why each one is significance? **(May 08)**
19. i. What do you understand by decentralization? **(May 08, 07, Nov 05)**
ii. How do you determine the need for decentralization? Explain.
20. Explain the concept of organization as a process and as a structure. **(Sep 07, May 07)**
21. Is there any link between mission, goal, objective, strategy and programme in an industrial environment. **(Sep 07)**
22. How is line and staff form different from other types of organization? **(Sep 07)**
23. Discuss the features of Line and Staff organization For what type activities it is best suited? **(Sep 07)**
24. What are the relevant points to be kept in mind while drawing the organization chart? **(Sep 07)**
25. i. Describe the various stages of product life cycle. **(Sep 07)**
ii. Explain how strategies keep changing in time with changes in the stages of product life cycle?
26. What is matrix organization and what is uniqueness? **(May 07, 06)**
27. What do you understand by decentralization? How do you determine the need for decentralization? Explain. **(May 07)**
28. i. What is organizational chart? **(May 06, Nov 05)**
ii. What is importance in Preparing organisation chart
iii. Give any Three different examples
29. Explain the concepts of line, line & staff and functional organizations. Also illustrate. **(May 06)**
30. Why does 'organizing' assumes increasing importance in the modern times? **(May 06)**
31. What are the principles of sound organization structure? Explain. **(Nov 05)**
32. i. What is the need for designing an organization? **(Nov 05)**

- ii. Is there any link between 'management' and 'organization'? Explain.
33. Compare and contrast between line and staff organization **(Nov 05)**
34. Describe the organization using the systems perspective? Explain how systems perspective is used to describe managers responsibilities. **(Nov 05)**
35. Define the external and internal environment of an organization explain the effect of these two environments on the managers working for the organization **(May 05, Jun 03)**
36. Discuss the features of Line and Staff organization with a chart. **(May 05)**
37. What do you understand by decentralization? How do you determine the need for decentralization? Explain. **(May 05)**
38. Define departmentation. Explain any two methods of departmentation. **(May 05)**
39. Explain the hierarchy of an organization with suitable charts **(May 05, Nov 02)**
40. Discuss utility of organization structure in organization **(Jan 03, Dec 02)**

UNIT-III

1. What is the processor for placing a purchase order (Jun 2013)
2. a) Consider finding the location of garment industry, state and explain the various factors to be considered.

(Dec 12)

3. State and explain the steps involved in method study procedure.

(May 10)

4. A hardware shopkeeper purchases nails from a manufacturer who produces them in different sizes of lots as given below in the table and also the number of rejected pieces. Compute the control limits for each lot and plot the p chart.

(May 10, Apr 13)

5. Differentiate between 'job order production' and 'batch production' systems. **(May 10)**
6. Define Acceptance Sampling. What are the methods of Acceptance Sampling? Explain.

(May 10)

7. What do you mean by work study? Explain the basic procedure involved in method study and work measurement. **(Sep 08)**
8. What is a flow chart? Discuss its utility for method study engineer. **(Sep 08)**
9. Define Plant layout. Explain the objectives of the good plant layout. **(Sep 08)**
10. The following table gives the number of rivets missing at aircraft final inspection. Prepare appropriate control chart. **(Sep 08)**
11. i. What are the objectives of plant layout?
ii. Explain the factors influencing plant layout. **(Sep, May 08, 07)**
12. Define work measurement. What are its objectives? **(May 08)**
13. A hardware shopkeeper purchases nails from a manufacturer who produces them in different sizes of lots as given below in the table and also the number of rejected pieces. Compute the control limits for each lot and plot the p chart.

14. Name and describe the various tools and techniques used in layout planning. **(May 08)**
(May 08)
15. Define Inspection. What are the kinds of Inspection? **(May 08)**
16. Give the basic procedure involved in work study. **(May 08)**
17. i. Compare and contrast product and process layout. **(Sep 07, May 06)**
ii. Supplement Your answer with suitable diagrams.
18. i. Explain the features of good stores layout? **(Sep, May 07)**
ii. Explain the formats of different documents used in a store?
19. i. What is work study? Discuss its main objectives
ii. Outline the procedure used for conducting method study? **(May 07, Nov 03)**
20. i. Discuss the factors which should be taken into account in deciding the location of a plant.
ii. What is a fixed position layout and under what conditions do you adopt it? Explain. **(May 07)**
21. What is a fixed position layout and under what conditions do you adopt it? Explain
22. i. Describe the various stages of product life cycle **(May 07 ,12)**
ii. Explain how strategies keep changing in time with changes in the stages of produce life cycle?
23. i. What is the concept of control chart for variables? **(May 06)**
ii. How will you construct them? Illustrate.
24. A simple of 100 automobile bearing is inspected daily for continuously 10 days. Draw the p chart with the following data
- | Date | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|----|----|---|----|---|----|----|----|---|----|
| Defectives | 18 | 12 | 6 | 15 | 2 | 20 | 14 | 10 | 8 | 8 |
25. What is a fixed position layout and under what conditions do you adopt it? Explain. **(May 06)**
26. 'Process layout is better than product layout' with what conditions do you agree? Support your answer. **(May 06)**
27. Check whether the number of observations is adequate for an accuracy of $\pm 5\%$ and confidence level of 95%
28. Discuss the factors which should be taken into account in deciding the location of a plant. **(Mar 06)**
29. What is a fixed position layout and under what conditions do you adopt it? Explain. **(Mar 06, Nov 05)**
30. What is fixed position layout? Explain its advantages and disadvantages. **(Nov 05)**
31. i. Explain how standard time is set under time study **(Nov 05)**
ii. Explain the various allowances and the reasons thereof to be considered while estimating the standard time.

32. What are the features of process layout, its advantages and disadvantages? **(Nov 04)**
33. What do you understand by product layout? Analyze the advantages and disadvantages of product layout. **(Nov 04)**
34. What is work measurement? What are the various approaches to work measurement? **(Dec 02)**
35. Discuss work measurement techniques you are aware of **(Dec 02)**
36. A residential school stipulates the study hours as 8.00 pm to 10.30 pm. Warden makes random checks on a certain student 11 occasions a day during the study hours over a period of 10 days and observes that he is studying on 71 occasions. Using 95% confidence interval, the estimated minimum hours of his study during that 10 day period is
i. 8.5 hours ii. 13.9 hours iii. 16.1 hours iv. 18.4 hours
(GATE 03)
37. The standard time of an operation while conducting a time study is **(GATE 02)**
i. mean observed time + allowances ii. normal time + allowances
iii. mean observed time X rating factor + allowances iv. normal time X rating factor + allowances.
38. In carrying out a work sampling study in a machine shop, it was found that a particular lathe was down for 20% of the time. What would be the 95% confidence interval of this estimate if 100 observations were made?
i. 0.16, 0.24 ii. 0.12, 0.28 iii. 0.08, 0.32 iv. None of these
(GATE 02)
39. In a time study exercise, the time observed for an activity was 54 seconds. The operator had a performance rating of 120. A personal time allowance of 10% is given. The standard time for the activity, in second is
i. 54 ii. 60.8 iii. 72 iv. 58.32
(GATE 00)
40. Preliminary work sampling studies show that machine was idle 25% of the time based on a sample of 100 observations. The number of observations needed for a confidence level of 95% and an accuracy of $\pm 5\%$ is
i. 400 ii. 1200 iii. 3600 iv. 4800
(GATE 96)
41. In a weaving operation, the parameter to be controlled is the number of defects per 10 square yards of material. Control chart appropriate for this task is
i. P-Chart ii. C-chart iii. R-Chart iv. None
(GATE 98)

UNIT-IV

1. a) derive the formula for Economic order quantity of basic inventory model and state its assumptions.
b) Explain various types of marketing strategies based product life cycle . **(jun 2013)**
2. a) Explain the various steps involved in method study. Draw any one chart used in method study.
b) Distinguish between observed time and normal time. **(Dec 12)**
3. XYZ Company requires 16000 units of a raw material costing Rs. 2 per unit. The cost of placing an order is Rs. 45 and the carrying costs are 10% per year per unit of the average inventory. The number of working days is 300 in a year. Determine:
(a) The economic order quantity

- (b) No. of orders to be placed in a year and
- (c) Order Interval.

(May 10)

4. Enumerate the duties of a store keeper. **(May 10)**
5. Whether the concept of Just-In-Time System is suitable in Indian industry or Not? Discuss. **(May 10)**
6. Dene marketing strategy. What are the methods of market segmentation? **(May 10)**
7. (a) State the benets of modern marketing concept.
(b) Compare and contrast between selling concept and marketing concept. **(May 10)**
8. Write short n
 - i. Purchase requisition
 - ii. Notice for inviting tenders
 - iii. Comparative statement
 - iv. Purchase order. **(Sep 08)**
9. Define consumer behaviour? What is its importance in marketing? **(Sep 08)**
10. Describe the marketing mix with its basic elements. **(Sep 08)**
11. What are the duties, functions and responsibilities of a purchasing manger? **(Sep 08)**
12. i. Explain the concept of 'Economic Order Quantity'. **(May 08, 06)**
ii. Explain the variables that go into the determination of EOQ. Show how the formula is derived.
13. What do you mean by marketing? How is it different from selling. **(May 08)**
14. "Marketing should aim at meeting a given consumer need rather than selling a given product." Comment. **(May 08)**
15. i. Define EOQ. Whether the factors that determine EOQ
ii. A firm requires 1000 units of a particular component. It pays Rs.50 per component to the vendor. The ordering cost is Rs.250 per order. The inventory carrying cost is 20% of the inventory per annum. Calculate
 - a. EOQ
 - b. Number of orders per year.
 - c. Total annual cost. **(May 08)**
16. i. Explain the concept of 'Economic Order Quantity'.
ii. Explain the variables that go into the determination of EOQ.
iii. Show how the formula is derived **(May 08Apr 13)**
17. i. What are the costs associated with effective inventory control?
ii. How would you deal with them in modern management? **(May 08)**
18. i. Explain the features of good stores layout? **(May 07, N**
ii. Explain the formats of different documents used in a store?
19. i. Define 'Market Segmentation'.
ii. Explain clearly the basis for market segmentations. **(May 07, 06)**

20. i. Explain the functions of materials manager?
 ii. How are the activities need coordination with other functional areas? **(May 07, Mar 06)**
21. What are the objectives and advantages of scientific inventory control? **(May 06)**
22. i. What are the factors that determine the choice of channels of distribution? **(May 06)**
 ii. Why do manufacturers favour intermediaries.
23. i. 'Shortages are undesirable, but some organizations create shortages Intentionally
 'Do you agree with the statement? Why? **(May 06)**
 ii. What is the role of other departments than materials departments to derive optimum results.
24. Determine the various stock control levels with the following information: Normal usage- 500 units per day. Minimum usage - 2400 units per day, maximum usage- 7700 units per day, lead time 10-20 days and EOQ is 8,000 units. **(May 06)**
25. Write short notes on: **(Mar 06)**
 i. Speculative purchasing
 ii. Rate contract purchasing
 iii. Tenders
 iv. Earnest money and Security deposit
26. i. Discuss the important functions of stores in an organization? **(Mar 06)**
 ii. Briefly explain the normal procedure to be followed while dealing with supplies.
27. i. What are the objectives and advantages of scientific inventory control? **(Mar 06,8,12)**
 ii. How product layout is different from process layout?
 iii. Explain both concepts with the help of suitable diagrams.
28. What are the various functions of marketing? ii. What factors influence consumer behaviour? **(Nov 05)**
29. Write short notes on **(Nov 05)**
 a. Safety stock b. Bin card c. Lead time
30. i. What are the inventory acquisition costs and inventory carrying costs? **(Nov 05)**
 ii. Derive an expression for an economic order quantity, clearly stating all the assumptions made in derivation.
31. The various functions of marketing? Explain. **(May 05)**
32. Evaluate different methods of purchasing? **(May 05)**
33. What is acceptance sampling? Illustrate the concepts of single and double sampling. **(May 05)**
34. Explain the functions of materials manager? **(May 05)**
35. What are the objectives of purchasing? Explain the merits and decentralized purchasing system. **(Nov 04)**
36. Define terms **(Dec 04)**
 i. Normal Cost
 ii. Crash cost
 iii. Normal time
 iv. Crash time

37. Explain the formats of different documents used in a store? **(Nov 04)**
38. Discuss the concept, role and utility of ABC analysis as applied to inventory control. **(May 03)**
39. i. Explain the functional organization of purchase department in an industrial concern.
ii. What are the duties, functions and responsibilities of purchase department **(May 03)**
40. Elaborate on the concept of material management to perform his job effectively **(Nov 03)**
41. Discuss the main techniques of statistical quality control. **(Nov 03)**
42. What is EOQ? How is it measured? Explain its importance inventory control. **(Apr 03)**
43. What is the significance of marketing function in an enterprise? Explain managerial aspects thereto, to attain corporate goals **(Apr 03)**
44. What is systems approach and contingency approach? Explain the relationship between them and their limitation.
45. There are two products P and Q with the following characteristics.
The economic order quantity (EOQ) of products P and Q will be in the ratio
i. 1 : 1 ii. 1 : 2 iii. 1 : 4 iv. 1 : 8
(GATE 04)
46. An item can be purchased for Rs. 100. The ordering Cost is Rs. 200 and the inventory carrying cost is 10% of the item cost per annum. If the annual demand is 4000 units, the economic order quantity (in units) is
i. 50 ii. 100 iii. 200 iv. 400
(GATE 02)
47. A company places orders for supply of two items A and B. The order cost for each of the items is Rs. 300/order. The inventory carrying cost is 18% of the unit price per year per unit. The unit prices of the items are Rs. 40 and Rs. 50 respectively. The annual demands are 10,000 and 20,000 respectively. i. Find the economic order quantities and the minimum total cost, ii. A supplier is willing to give a 1% discount on price, if both the items are ordered from him and if the order quantities for each item is 1000 units or more. Is it profitable to avail the discount?
(GATE - 2000)
48. If the demand for an item is doubled and the ordering cost halved, the economic order quantity
i. remains unchanged ii. increases by a factor of
iii. is doubled iv. is halved
(GATE 95)
49. For xyz company, the annual requirement of an item is 2400 units. Each item costs the company Rs. 6. The supplier offers a discount of 5% if 500 or more quantities are purchased. The ordering cost is Rs. 32 per order and the average inventory cost is 16%. Is it advisable to accept the discount? Comment on the result. **(IES 04)**
50. ABC analysis in materials management is a method of classifying the inventories based on
i. The value of annual usage of the items ii. Economic order quantity
iii. Volume of material consumption iv. Quantity of Materials used
(IES 03)
51. Consider the following statements in respect of double sampling plan:
i. Average number of pieces inspected is double that of single sampling.
ii. Average number of pieces inspected is less than that for single sampling.

- iii. Decision to accept or reject the lot is taken only after the inspection of both samples.
- iv. Decision to accept or reject the lot is reached sometimes after one sample and sometimes after two samples.
Which of these statements are correct?
a. 1, 2 and 3 b. 2 and 4 c. 1 and 4 d. 2 and 3
(IES 03)
52. Economic Order Quantity is the quantity at which the cost of carrying is
i. minimum ii. equal to the cost of ordering
iii. less than the cost of ordering iv. cost of over-stocking
(IES 02)
53. A shop owner with an annual constant demand of 'A' units has ordering costs of Rs. 'P' per order and carrying costs Rs. 'I' per unit per year. The economic order quantity for a purchasing model having no shortage may be determined from
i. ii. iii. iv. **(IES 02)**
54. Why do we need inventory? Explain why we need to optimise the order quantity. The demand for a component is 10000 pieces per year. The cost item is Rs. 50 and the interest cost is 1% per month. The cost associated with placing an order is Rs. 240. What is the EOQ?
(IES 02)
55. What is an inventory? A company uses a certain component X at the rate of 5000/year. The cost/item is Rs. 20 and it costs Rs. 200 to place an order. The annual carrying cost of inventory is 10% of the price of the item. Storage cost is negligible. Assume zero safety stock. Calculate the economic Order Quantity (EQO).
(IES 99)
56. Annual demand for a product costing Rs. 100 per piece is Rs. 900. Ordering cost per order is Rs. 100 and inventory holding cost is Rs. 2 per unit per year. The economic lot size is
i. 200 ii. 300 iii. 400 iv. 500
(IES 97)
57. A store sells 5200 cases of a cold drink per year. The supplier charges Rs. 100 for each delivery regardless of how many cases have been ordered; delivery always occurs the day after ordering and the average carrying cost is Rs. 10.40 per unit per year. Find the number of cases per order. **(IES 95)**

UNIT-V

1. a) Explain the various performance appraisal methods.
b) What are the different techniques of selection followed by a personnel manager for employing he personnel in an organization
(Jun 2013)
2. a) Explain the operation of two-bin system with a neat diagram. Why is it a costly system compared to fixed period system?
b) State the steps involved for ISO9000 certification. (Dec 2012)
- 3 Explain different techniques of job evaluation. What are the advantages and disadvantages of each technique **(May 10)**
4. How does the personnel function change as firm grows in size? Briefly describe each stage of development. **(May 10)**
5. What is job evaluation? Explain the objectives of job evaluation. How do you prepare the ground for evaluation jobs?
(May 10)

6. How should one go about identifying training needs in an organization? **(May 10, Apr 13)**
7. Explain different techniques of job evaluation. What are the advantages and disadvantages of each technique. **(Sep 08)**
8. Do you prefer centralized recruitment or de-centralized recruitment for recruiting executives in public sector? Substantiate your argument with adequate reasoning. **(Sep 08)**
9. Evaluate the significance of performance appraisal in an educational institution. How would you make it more effective? **(Sep 08)**
10. Describe in detail the process of performance appraisal. **(Sep 08)**
11. i. What is Induction? What is the purpose of induction?
ii. What is the difference between Training and Development? Explain. **(May 08, Sep 07)**
12. i. Discuss in detail the objectives and functions of Human Resource Management?
ii. 'The success of an organization to a greater extent depends on how the HRD acts' Substantiate **(May 08, 07, Nov 05)**
13. Explain different methods of on-the-job training and off-the-job training. **(May 08, Nov 05)**
14. What are the key functions of a Human Resource Manager? **(May 08)**
15. i. What is the role of Human Resource Manager in development and growth of an organization?
ii. Explain how 'Human Resource Planning' process can be formulated? **(May 08)**
16. Discuss in detail the objectives and functions of Human Resource Management? **(May 08)**
17. Briefly explain the concept of selection. What are the different techniques of selection followed by a Personnel Manager, while employing the personnel in an organization? **(May 08)**
18. Highlight the significance of job description in selection. **(May 08)**
19. Explain some of the problems in interview as a method of selection? **(May 08)**
20. What are the best methods of recruitment for positions below supervisory level? **(May 08)**
21. Why do personnel managers fail? Why do HR Managers succeed? Explain. **(Sep 07, 12)**
22. What are the key functions of a Human Resource Manager? **(Sep, May 07)**
23. Explain how manpower planning helps to evolve different HR strategies. **(Sep, May 07)**
24. What is labour turnover? What are the reasons and disadvantages of high labour turnover in call centres? **(Sep 07)**
25. What are the implications for HRM with the increasing number of highly educated and professional work force entering the employment market? How HR manager get ready to force them? **(Sep 07)**
26. What is performance appraisal? What are the steps involved in performance appraisal? **(May 07)**
27. What do you understand by job evaluation? Explain in detail different methods of job evaluation. **(May 07)**
28. What are the objectives and activities associated with manpower planning? Explain.

- (May 07, 06)**
29. How does job analysis form the basis for job description and job specifications? How does it help the personnel manager? **(May 06)**
30. What is the role of a personnel manager in the present day challenges -Elaborate. **(May 06)**
31. What is the purpose of training? Explain how training can be imparted? **(May 06)**
32. i. What do you understand by 'Human Resource Management'? **(May 06)**
 ii. What are its elements?
 iii. What is its importance to organizational development.
33. What is recruitment? Evaluate different the sources of recruitment. **(May 06, Nov 05)**
34. i. How has personnel management changed over the years? Explain. **(May 06, Nov 05)**
 ii. What are the functions of a personnel manager in a large manufacturing or-ganization? Explain in brief.
35. How can Human Resource manager bring about HR orientation in an organization and what are the implications? **(May 06)**
36. Explain the following concepts with appropriate examples. **(May 06)**
 i. Job description
 ii. Job specification
 iii. Job enrichment
 iv. Job requirement.
37. What are the stages in manpower planning? Discuss. **(Mar06)**
38. What are the objectives of wage and salary administration function? **(Mar06)**

UNIT VI

1. What are the differences between PERT and CPM
 (jun 13, apr 13)

2. The following represents a project that should be scheduled using PERT

Activity	Immediate Predecessors	Times (days)		
		Optimistic time	Most likely time	Pessimistic
time				
A	-	10	22	28
B	A	4	4	10
C	A	4	6	14
D	B	1	2	3
E	C	1	5	9
F	C,D	7	8	9
G	E,F	2	2	2

- a) Draw the network
- b) What is critical path and the expected project completion time?
- c) What is the probability of completing this project within 35 days?
 (Dec 12)

3. A project has nine activities, the expected time of each activity is as follows:

- (a) Draw the project network
- (b) Identify the critical path
- (c) Find project duration
- (d) Find slack time at each event?

(May

10)

4. The normal cost and duration, crash cost and duration of activities of a project are given in table. If the overhead cost is Rs.45 per day, determine the optimal cost schedule for the project by drawing the project schedule Vs total cost.

(May 10)

5. The various activities related to a project and their three time estimates are listed in table. You are required to
- (a) Determine the duration of the project
 - (b) Find the variance of all activities and the variance of the project
 - (c) What is the probability of completing the project in 14 days?
 - (d) What due date has about 92% of chances of being met?

(May 10 12)

6 Why is it necessary to PERT network? How does it help the management of a project?

(May 10)

7. Given the following data, compute the expected project duration by drawing a network and indicate critical path. Find total slack of each event. **(Sep 08)**

8. Explain how do you determine the probability of meeting the scheduled date of completion of project. **(Sep 08, 09, 12)**

9. How do you compute the probability of completion of project within scheduled time? **(Sep 08)**

10. Draw the PERT network for the following activities and determine the probability of completing the project in 48 days. 6. How do you compute the probability of completion of project within scheduled time?

(Sep 08 may12)

11. From the activity details given below, determine the optimal project duration and optimal project cost.

Activity	Normal				
Crash Time (days)	Cost in Rs.	Time(days)	Cost in Rs.		
1-2	8	100	6	200	
1-3	4	150	2	350	
2-4	2	50	1	90	
2-5	10	100	5	400	
3-4	5	100	1	100	
4-5	3	80	1	100	

12. The following are the activities identified in scheduling the time required to install an improved local area network (LAN). Draw the PERT network and identify the critical path.

(May 08)

13. The following table gives required information of a project

(May 08)

14. The indirect cost is Rs.650 per day. Determine the optimum cost and time for the project. **(May 08)**
 You are given the following data:
 Draw a network diagram after determining
- expected task time and their variance
 - earliest and latest expected time to reach each node,
 - critical path and
 - probability of completing the project in 48 days.
15. The following table lists the jobs of a network along with the time estimates. **(May 08)**
- Draw the project network diagram.
 - What is the approximate probability that jobs on the critical path will be completed by the due date of 35 days
 - What is your estimate of the probability that the entire project will be completed by the due date? Explain.
 - What due date has 90% of chance of being met?
16. The following table gives the information relating to a project . By using the given data calculate the optimum duration of the project. Where indirect cost is estimated Rs.2000 per day. **(May 08)**
17. What do you mean by crashing a network? State step by step procedure of crashing **(May 08)**
18. What is the importance of Cost Analysis? Account for different types of cost citing examples. **(May 08)**
19. The following table gives the data relating to a project Indirect cost per week Rs.1,000. By using iterative procedure, determine
- The optimum project completion time **(Sep 07)**
 - Critical path(s) and
 - Minimum total cost of project completion.
20. Draw the network for the following project; it is further given that project completion time is 42 days. Find the project duration. Also identify the critical path. **(Sep 07)**
21. Global Tele shopping Ltd., is a high technology retailer and mail order business. In order to improve its process the company decides to install a new PC system to manage its entire operations (i.e payroll, accounts, inventory) > Terminals at each of many stores will be networked for fast dependable service. The specific activities that will need to be accomplished before the system is up and running is listed below. Draw a network diagram for the project and determine the critical path and duration of the project **(Sep 07)**
22. Explain and illustrate what you understand by network analysis. How would you compare PERT with CPM? **(Sep, May 07, 06)**
23. Given the following data, work out the minimum duration of the project and corresponding cost. **(Sep 07)**
- | Activity | Job | Time | Cost | | |
|----------|-----|------|------|------|------|
| A | 1-2 | 10 | 6 | 400 | 600 |
| B | 1-3 | 4 | 2 | 100 | 140 |
| C | 2-4 | 6 | 4 | 360 | 440 |
| D | 3-4 | 8 | 4 | 600 | 900 |
| E | 2-5 | 8 | 6 | 840 | 1100 |
| F | 4-6 | 6 | 2 | 200 | 300 |
| G | 5-6 | 10 | 8 | 1200 | 1400 |
24. Draw the network for the following project, identify
- the critical path,
 - find the project duration and
 - indicate slack at each event.

Activity	0-1	1-3	1-2	2-3	1-4	3-4	4-5
Time(months)	3	16	6	8	10	5	3

25. Draw the network for the following project, identify (May 07, Mar 06)
 i. the critical path,
 ii. find the project duration and
 iii. indicate slack at each event.

Activity	0-1	1-3	1-2	2-3	1-4	3-4	4-5
Time(months)	3	16	6	8	10	5	3

26. The following details relate to a small project with the help of which compute the probability of completion of project within scheduled time. The expected time of each activity is as follows:

SI. No.	1	2	3	4	5	6	7	8	9
Activity	1-2	1-3	2-4	3-4	4-5	5-6	3-5	5-7	6-7
Activity	6	8	7	12	3	5	7	11	10

27. i. Draw a Gantt Chart for the following programme and prepare a milestone chart for the Gantt Chart
 ii. Explain the limitations of Gantt chart.

28. Given the following data, work out the minimum duration of the project and corresponding cost.

29. i. What are the objectives of network analysis ? (Mar 06)
 ii. What are the applications of network analysis?
 iii. State the differences between PERT and CPM.

30. Write a note on optimization of project cost and project duration. Illustrate your answer. (Mar 06)

31. Explain in details about constructing a network diagram. What are the Points to be kept in mind for drawing network. (Mar 06)

32. Write a critical note on project crashing. (Mar 06)

33. With the help of the following data, draw the net work. (Mar 06, May 06)
 i. draw the network
 ii. Find project duration for the following project and
 iii. Identify the critical path

Activity	5-6	5-7	1-2	1-3	1-4	2-4	2-5	3-4	3-7	4-6	4-7
Time(months)	4	4	6	12	7	11	7	8	8	13	4

34. "PERT provides the framework with which a project can be described, scheduled and then controlled." Discuss. (Mar 06)

35. A maintenance foreman has given the following estimate of time and cost for jobs in a motor overhaul project. Determine the optimum duration and cost. (Mar 06, 07, Apr 13)

Job Predecessor	Days	Normal Cost Cost(Rs.)	Days	Crash Cost Cost(Rs.)	
Disassemble motor	-	8	160	6	200
Clean and paint frame	A	7	80	4	190
Rewind armature	A	12	200	5	380
Replace bearings	A	9	140	5	220
Assemble and inspect motor	B,C,D	6	100	6	100

The indirect cost is Rs. 150/-hr.

36. What is meant by ‘crashing’ of network? Give step by step procedure for crashing. Illustrate with an example of your choice.(N) **(Mar 06,Nov 05)**

37. A manufacturing company is planning to introduce a new product commercially. The list of activities to be carried out with the corresponding duration of time in weeks is listed below. **(May 06,Nov 05)**

Activity	description	duration	immediate predecessor
A	initial discussions	3	-
B	product design	11	A
C	market survey	9	A
D	market evaluation	2	C
E	product costing	5	B
F	Sales plan	6	C
G	Product pricing	2	D,E
H	Prototype construction	11	F,G
I	Market information preparation	8	B
J	Prototype testing	9	H,I

Draw the network to represent various activities of the project, determine the min-imum duration of the project.

38. Following data relates to a certain project.

(May 06)

Activity	Optimistic time (t_0)	Most likely time (t_m)	Pessimistic time (t_p)
1-2	2	5	14
1-3	3	12	21
2-4	5	14	17
3-4	2	5	8
4-5	1	4	7
3-5	6	15	30

- Construct the network,
 - find the project,
 - identify the critical path, and
 - find slack at each event.
39. The following is the list of events found in the process of organizing a student’s convention. Identify the logical sequence and fix the duration as per the estimate. Draw a PERT network, with assumed data

(May 06)

- Set convention date.
- Set convention location.
- Select convention chairman
- Select convention facilities.
- Develop convention programme
- Select convention speakers
- Set convention cost
- Notify the members of convention programme
- Print programme
- Notify convention facility of desired setup of each meeting room
- Select banquet menu
- Determine recipient of outstanding member award
- Prepare citation for outstanding member award
- Determine honorarium for speakers
- Arrange for registration
- Make boarding and lodging arrangements

xvii Arrange transportation from airport
xviii

Await convention

40. i. Discuss the features of functional organization.
ii. How is different from other forms of business structures? **(Nov 05)**

UNIT-VII

1 a) What is SWOT analysis? What is it significant?
(jun 13)

b) Why do you need strategies? Explain how is beneficial to modern industry?

2. What are the stages of strategic formulations and implementation?
(Dec 12)

3. What is environmental scanning and what are the factors effecting external environment
(May 10)

4. Can strategic management fail? Can it be prevented?
(May 10)

5. According to Porter's model, what determines the competition intensity in an industry? With respect to arm that you know, identify the key strategic factors in its external environment.
(May 10)

6. What are the criteria used to determine the corporate strengths and weaknesses? Use these criteria for a company you are familiar with to identify its strengths and weaknesses. Suggest corrective actions.
(May 10)

7. What is environmental scanning and what are the factors effecting external environment. **(Sep 08)**

8. As a strategic manager, develop a realistic model for the evaluation and control process in the Indian context. Discuss. **(Sep 08)**

9. Can strategic management fail? Can it be prevented? **(Sep 08)**

10. What do you mean by mission and objectives of the organization? Explain with examples? **(Sep 08)**

11. How do you carry out SWOT Analysis for a manufacturing unit? Explain. **(May 08, 06)**

12. What are the external factors to be considered while assessing opportunities and threats?
(May 08, 06)

13. What do you understand by strategic business unit? Discuss its role and relevance in corporate planning.
(May 08, Dec 02)

14. i. Explain the concept nature and scope of corporate planning.
ii. What are the advantages and limitations of corporate planning. **(May 08)**

15. What are the criteria used to determine the corporate strengths and weaknesses? Use these criteria for a company you are familiar with to identify its strengths and weaknesses. Suggest corrective actions. **(May 08)**

16. State the significance of corporate planning. What is the need for planning? **(May 08)**

17. Strategic alliances are temporary. Do you agree? Justify. (May 08)
18. What is the relationship between corporate governance and social responsibility? (May 08)
19. Identify the factors that are to be diagnosed in external and internal environment of a business organization. (May 07, 06)
20. What is SWOT analysis? What is its significance? (May 07, Mar 06, Apr 13)
21. What are the factors of external and internal environment to be considered for formulating the strategy? Explain. (May 07, Nov/Dec 05)
22. How do you formulate and implement strategy? Explain. (May 06)
23. How do you formulate and implement strategy? Explain. (May 06)
24. What is environmental scanning? Why is it carried out? (May 06)
25. Explain the following: (May 06)
 - i. Strategy variations
 - ii. Generic strategy Alternatives.
26. Design a merit rating form for high skilled category of workers of medium sized factory. (Mar 06)
27. What is recruitment? Evaluate different the sources of recruitment. (Mar 09,10)
28. Write short notes on the following: (Mar 06)
 - i. Strategic alliances
 - ii. Strategic choice
 - iii. Allocation of resources and formulation of organization structure.
29. What is SWOT analysis? How to develop strategic alternative in light of SWOT analysis? (Mar 06, June 02)
30. What is strategic business unit and what is its role and relevance in corporate planning? Illustrate. (Nov 05)

UNIT-VIII

1. Write short note on on
(jun 2013)
 - a) Kaizen
 - b) Capability Maturity Model (CMM)
 - c) Business Process
 - d) Value Chain Analysis
2. a) State and explain various functions of human resource management (HRM)
b) Explain the factor comparison method of job evaluation and state its advantages and limitations over other method (dec 12)
3. What do you mean by Balanced Score Card? What are its advantages? (May 10)
4. What do you understand by total quality management? How does this concept

- 10) differ from quality control techniques? **(May)**
5. Explain the seven principles of Michael Hammer relating to re-engineering. **(May)**
10)
6. What do you understand by total quality management? How does this concept differ from quality control techniques? **(Sep 10, may12)**
7. What is portfolio management ? Discuss various key aspect in investment Decisions. **(Sep 08)**
8. Explain the philosophy behind Total quality management customer satisfaction and continuous improvement. What are the objectives of TQM? **(Sep 08)**
9. Write short notes on:
i. Capability Maturity Model (CMM)
ii. Just-in-Time (JIT)
iii. Balanced Scored Card. **(Sep 08)**
10. What are some of the guidelines that can be followed for the purpose of improving MIS?
11. What is Material Requirement Planning (MRP) Illustrate.
12. Explain the seven principles of Michael Hammer relating to re-engineering.
13. What are the different methods TQM? Explain any two methods in briefly
14. Make a list of the items and services that are bring outsourced.
15. “Anything and everything can be outsourced”. Explain with suitable illustration.
16. Define the terms quality, quality creation, quality control, and quality assurance. Bring out importance of quality.
17. Explain the quality control techniques
18. What is quality? How is it ensured?
19. What is QC? Discuss the formation and working of QC in an engineering industry?
20. Explain the term inventroy. How would you classify it?
21. Explain, how you would carryout material requirement planning? State the basic steps involved in setting up MRP.
22. Discuss briefly the SQC procdures by charts and diagrams. What is meant by Quality Cycle? Is there any additional benefit derived from this?
23. Define MIS? Give out objectives functions of the MIS?
24. Distinguish between Data processing system and Management information system.
25. Give chracteristic features of computer systems
26. What is resource requiements planning? Is it the same as Rough-cut capacity planning?

27. Discuss the role of MPS, MRP and CRP in resource requirement planning
28. What are the objectives of MRP? Explain how each of these objectives to achieved.
29. Discuss the following issues used in MRP system
 - i. Lot sizing
 - ii. Pegging
 - iii. Cycle counting
 - iv. Time fence
30. List out problems faced in using the MRP system?
31. Distiguish between regenerative MRP and net change MRP?
32. What is a closed loop MRP. What are its uses.
33. What is ERP.Listout features of ERP. Explain application of ERP
34. Why do you think computers have a different impact on managers at various organisationallevels.
35. Information technology is being used to restructure work by transforming business process. Explain.
36. How can information technology help in re-engineering business process?
37. How information technology re-engineered business processes at several levels of business.
38. What in BPO?
39. What is the business philsophy behind outsourcing?
40. What are the situational factors that paved way to the emergence of BPO?
41. BPO: Its impact on the western and asian markets.
42. "The growth of BPO never disturbed the global market trends" enumerate.
43. BPO: A significant development without boders explain
44. Do you thick that outsourceing has restrucutred the business ethics and business psyche:
45. BPO offers a prethora of oppourtunities and evenues as letter world give reasons.
46. What do you mean by Balanced Score Card? What are its advantages?